Despite growing numbers, indigenous Mexican migrants are relatively invisible to health practitioners who group them with nonindigenous, mestizo Mexican-origin populations. Associations between indigenous and mestizo cultural identifications with psychosocial characteristics and health indicators among indigenous Mexican migrants were examined. Results revealed gender differences in cultural identifications, perceived discrimination, self-esteem, self-efficacy, and various health indicators including depression severity, culture-bound syndromes, and self-rated health. Multivariate regression and structural equation path modeling demonstrated how indigenous cultural identification and perceived discrimination affects health. Findings suggest that interventions should utilize indigenous community–based activities designed to promote self-esteem and the value of indigenous culture, with a focus on females.

**Keywords:** Indigenous Mexicans, migrant farmworkers, cultural identification, discrimination, depression, culture-bound syndromes, social determinants of health

**INTRODUCTION**

Latinos make up 48.4 million or 15.8% of the total population in the United States, making them the nation’s largest ethnic minority group, and about 31.7 million or 65.5% are of Mexican origin (U.S. Census Bureau, 2010). About 11.4 million of the Mexican-origin population are Mexican born, accounting for 29.6% of foreign-born residents in the United States where Mexican-born individuals also make up 75% of the agricultural workforce (Carroll et al., 2005). Research reveals migrants from indigenous, pre-Columbian communities in southern Mexico with unique languages and cultural identities comprise a rapidly growing proportion of the U.S. agricultural workforce.
Many indigenous Mexican migrant farmworkers transition into other sectors of the U.S. workforce and establish permanent residence where they are increasingly being encountered by social workers and other health practitioners (Martinez, 2005; Mines et al., 2010; Stephen, 2007). In their analysis of 2000 U.S. Census data, Huizar Murillo and Cerda (2004) identified a “Hispanic American Indian” population of more than 407,000, which they maintained should be treated as a minimum estimate due to the ambiguity of Census race/ethnic categories and undercount issues. Most of those who identified as Hispanic and American Indian were of Mexican origin. In 2008, the total indigenous Mexican-origin population in rural California alone was estimated to be greater than 165,000 (Mines et al., 2010). Despite their growing numbers in the United States, indigenous Mexican-origin individuals are relatively invisible as their uniqueness often goes unrecognized by health practitioners who group them along with nonindigenous Mexican-origin populations (Alderete et al., 2000a, 2000b).

Indigenous Mexicans migrate to the United States with varying levels of identification with a particular minority indigenous culture, as well as with a majority, mestizo culture. Martinez Novo (2006) found that “As a result of racialized definitions of the nation, in Mexico mixed-blood people, or mestizos, have been defined as the mainstream, unlike the United States, where the mainstream has been understood as white” (p. 167). Conceiving of the indigenous Mexican population as a minority (the 2000 Mexican Censo identified an indigenous population of 9,854,301 individuals, or 9.5% of the overall population) unifies them on the basis of their differences from mestizos (Linares, 2008). However, we cannot overlook that in Mexico there are more than 62 distinct ethnolinguistic indigenous groups with great differences between them, as each preserves their own languages, traditions, and unique ways of life (Linares, 2008). Researchers working with indigenous Mexican populations in Mexico have found that indigenous Mexican identities are primarily based in their local communities, and that members of nearby indigenous communities may often not even recognize a shared indigenous cultural identity despite speaking similar languages (Kearney, 2000; Linares, 2008). Health researchers and practitioners seeking to identify the impact of cultural identification on the health of indigenous Mexican-origin populations may find it difficult to disentangle the effects of a community-based, indigenous cultural identification from the effects of identification with a mestizo Mexican culture, as these individuals identify to varying degrees with elements of both cultures.

As a result of their historical and ongoing experience of racism and discrimination in Mexico, indigenous Mexicans are minimally integrated into mestizo Mexican populations in Mexico, and this pattern is typically reproduced in the United States where indigenous Mexicans experience a twofold marginality, because they are typically not integrated into either mainstream U.S. or Mexican cultural groups (Alderete et al., 2000a, 2000b; Fox & Rivera-Salgado, 2004; Holmes, 2006; Kearney, 2000; Linares, 2008; Martinez Novo, 2006; Mines et al., 2010). Compared to their mestizo counterparts, indigenous individuals rely on different networks of social support in their cultural community, remain more connected to their communities of origin in Mexico, and adhere to different value and belief systems rooted in their traditional indigenous cultures (Kearney, 2000; Mines et al., 2010). When migrants identifying with minority cultures come into contact with new cultures, especially under circumstances where a majority culture(s) is perceived as hostile and threatening, these individuals may experience significant levels of stress that can adversely affect health. There is a scarcity of research examining this process among indigenous Mexican-origin populations in the United States (Alderete et al., 2000a, 2000b; Finch et al., 2004). This can be partly explained by their extensive experience of discrimination and exclusion both in Mexico and the United States, which has resulted in a high level of distrust and suspicion of outsiders that makes it very difficult for researchers to gain access to these communities (Holmes, 2006).

The effects of discrimination on the health of migrants identifying with minority cultures can be moderated by a complex array of sociocultural factors. This exploratory study examines the
effects of cultural identification and perceived discrimination on the health of a difficult-to-access and rarely studied indigenous Mexican migrant farmworker population living in isolated rural camps in the northwestern United States. Implications of study findings for future research and issues relevant to the delivery of health services to indigenous Mexican-origin populations are discussed.

METHOD

Research Questions
This research seeks to answer the following questions. Among indigenous Mexican migrant farmworkers: (a) To what extent does gender differentiate demographic, psychosocial, and health indicators, as well as cultural identification?; (b) To what extent is cultural identification associated with perceived discrimination, controlling for demographic and psychosocial variables?; (c) To what extent and how does cultural identification and associated perceived discrimination affect health indicators?; and (d) How does self-esteem, self-efficacy and religiosity influence this relationship between perceived discrimination and health?

Participants
Social work researchers accompanied agency workers that provided health care services, as well as a variety of other services to isolated, rural migrant farmworker camps in Oregon. Research participants were recruited during outreach activities, as researchers approached all participating individuals and invited them to take part in a study comprising survey-based face-to-face interviews. Indigenous Mexican status was determined by asking participants if they self-identified as indigenous, or if they, their parents, or their grandparents, spoke any indigenous Mexican languages (e.g., Mixteco, Zapoteco, Triqui, Náhuatl). Linguistic and self-identification criteria are considered fundamental indicators of indigenous ethnicity, and this method has previously been used in research that sought to identify indigenous Mexican respondents in the United States (Alderete et al., 2000a, 2000b; Gabbard et al., 2008). A total of 123 indigenous, Mexican-origin migrants were interviewed.

All study participants reported being born and raised in Mexico, primarily from the Mexican states of Oaxaca (n = 82, 66.7%), Chiapas (n = 13, 10.6%), Puebla (n = 10, 8.1%), and Veracruz (n = 10, 8.1%). Participants included members of nine major indigenous language/cultural groups including Zapotec (n = 40, 32.5%), Náhuatl (n = 23, 18.7%), Triqui (n = 20, 16.3%), and Mixtec (n = 19, 15.4%). Most were young, with a median age of 27 (M = 30.70, SD = 11.42), male (69.9%, n = 86), with few years of formal education (M = 4.78, SD = 3.17), and reported living in the United States for a total of fewer than 5 years (M = 4.56, SD = 4.90), which translated into 15% of their life on average (SD = .13).

Procedures
As a result of immigration status concerns and in accordance with university Institutional Review Board requirements, the study was verbally described and verbal informed consent was obtained from interested individuals. Due to the diversity of indigenous languages spoken by participants and the scarcity of indigenous language speaking interviewers, and as all participants and interviewers spoke Spanish, a strategic decision was made to conduct all interviews in Spanish. A team of bilingual/bicultural researchers, including local Latino health practitioners, a representative from the Mexican-origin migrant farmworker community, and a visiting Mexican primary care doctor.
with more than 11 years of practice experience in remote, rural indigenous Mexican communities collaborated in the translation and back-translation of the survey questionnaire, which emphasized cultural and linguistic adaptations appropriate for use with a rural, Mexican-origin population with little formal education. Members of this team assisted throughout the interviewing process to ensure interviews were conducted in a culturally appropriate manner.

**Measures**

The Orthogonal Cultural Identification Scale (OCIS) developed by Oetting and Beauvais (1990/1991) was utilized to measure the cultural identification of participants for this research, as its design includes general attitudinal and behavioral items, but without specific content, which permits its utilization across cultures. In the OCIS, identification with any culture is essentially independent of identification with any other. To accommodate for the experience of living in multiple worlds, Oetting and Beauvais allowed for the possibility of identification with more than one culture, which was operationalized in four items that addressed the extent to which first, the respondent, and second, his or her family (a) live by or follow the way of life of a particular ethnic group and (b) are a success in that way of life. In this research, each of the four questions was asked first in reference to the participant’s particular indigenous culture, and subsequently in reference to the majority, mestizo Mexican culture. For each item, participants were presented with a 4-point Likert-type scale with zero representing the lowest level of cultural identification.

A two-factor OCI model was tested using confirmatory factor analysis (CFA) in EQS (Bentler, 1995). The indigenous-Mexican and mestizo-Mexican OCI factors were each indicated by four observed variables, and an interfactor correlation was specified. This two-factor model fit well (Satorra-Bentler scaled χ² = 24.34, df = 15, p = .06; Comparative Fit Index [CFI] = .989; root mean square error of approximation [RMSEA] = .072; 90% confidence interval [CI] of RMSEA [.000, .122]), with strong internal consistency reliability (Cronbach’s α = .88). Standardized factor loadings were large (.79–.94) and statistically significant, with an interfactor correlation of .36.

Starting with three items previously used with Mexican migrant farmworkers to capture perceived discrimination (Finch et al., 2004; Finch et al., 2000), and adding three more slightly modified items designed to address the standpoint of indigenous Mexicans, a six-item measure was developed that inquired as to respondents’ level of perceived discrimination. For example, using a 4-point scale (0 = not at all; 3 = very much), study participants were asked, “How much do you find it difficult to find work you want because you are of indigenous descent? How much do you feel unaccepted by others due to your indigenous culture?” A total perceived discrimination score was calculated that ranged from 0 to 18. A factor model was tested and goodness-of-fit test indicated this model fit well (χ² = 3.13, df = 3, p = .37, CFI = .998, RMSEA = .019, 90% CI of RMSEA [.000, .156]). Internal consistency reliability of the discrimination measure calculated by Cronbach’s alpha was .83. All standardized factor loadings were significant and ranged between .47 and .73.

Self-esteem among participants was measured using the 10-item Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). As previous research with the RSE has found the five positively worded items loaded on one factor and the five negatively worded items on another, a two-factor model was developed (Greenberger et al., 2003). Goodness-of-fit was tested and standardized factor loadings were reviewed. One negatively-worded item “I wish I could have more respect for myself” was not significantly predicted by either factor. Excluding this item resulted in good fit with this two factor model (Satorra-Bentler scaled χ² = 39.20, df = 26, p = .05, CFI = .945, RMSEA = .065, 90% CI of RMSEA [.008, .103]). Cronbach’s alpha for the RSE was .83. All standardized factor loadings were significant and ranged between .42 and .83. The interfactor correlation was found to be .57. A total self esteem score was calculated that ranged from 0 to 27, with a higher score indicating a higher level of self-esteem.
Self-efficacy was measured using the 8-item New General Self-Efficacy Scale (NGSE; Chen et al., 2001). On this scale, a higher score indicates a higher level of self-efficacy (range: 0–24). CFA using a one-factor model found good fit with study data ($\chi^2 = 32.56$, $df = 20$, $p = .04$, CFI = .934, RMSEA = .072, 90% CI of RMSEA [.017, .115]). Cronbach’s alpha for the NGSE was .86. All standardized coefficients with factors were significant and ranged between .38 and .88.

To measure the level of religiosity among participants, a four-item scale was developed that addressed church affiliation, church attendance, importance of religious beliefs, and spiritual comfort seeking (Finch et al., 2004) with a total score that ranged from 0 to 10. CFA based on a one-factor model revealed good fit with study data ($\chi^2 = 1.10$, $df = 2$, $p = .58$, CFI = .998, RMSEA = .000, 90% CI of RMSEA [.000, .150]). Cronbach’s alpha for total religiosity was .70. All standardized coefficients with factors were significant and ranged between .42 and .96.

The Spanish version of the 9-item depression module of the Patient Health Questionnaire (PHQ-9) was used to measure depression severity (Diez-Quevedo et al., 2001; Wulsin et al., 2002). Each PHQ-9 scale item asked for the presence and frequency of nine depressive symptoms experienced by the respondent in the previous 2 weeks. Participants were asked to assign scores for each item, ranging from 0 (never) to 3 (nearly every day), and a total severity score of depression (0–27) was calculated for each participant. CFA based on a one-factor model found good fit with study data ($\chi^2 = 37.87$, $df = 27$, $p = .08$, CFI = .922, RMSEA = .057, 90% CI of RMSEA [.000–.097]). All standardized factor loadings were statistically significant (values ranged from .53–.82). The internal consistency reliability of the PHQ-9 measured by Cronbach’s alpha was .87.

Mental health disorders recognized within a particular culture, but not recognized by mainstream Western medicine, are generally referred to as folk illnesses or culture-bound syndromes (Weller et al., 2008). Three such folk illnesses prevalent in indigenous Mexican cultures are nervios (“nerves”), susto (“fright”), and coraje (“anger”). These cultural idioms of distress are covered in the Glossary of Culture-Bound Syndromes in Appendix I of the Diagnostic and Statistical Manual of Mental Disorders (4th ed., rev.; DSM-IV-TR; American Psychiatric Association, 2000), which states these syndromes refer to “patterns of aberrant behavior and troubling experience that may or may not be linked to a particular DSM-IV diagnostic category [and] are generally limited to specific societies or culture areas” (p. 898). Previous research has found these syndromes to be related to depression in Mexican-origin populations (Cartwright, 2007; Kennedy & Olsson, 1996; Salgado de Snyder et al., 2000; Weller et al., 2008). A count of the number of culture-bound mental health syndromes respondents reported experiencing in their lifetime was calculated, which ranged from 0 to 3. Single-items asked for self-ratings on a scale of 0 (poor) to 3 (very good) for physical, and for emotional/mental health and were included in this study as health indicators.

Data Analysis

A three-step data analysis process was undertaken in this study. First, to examine to what extent gender differentiated among all variables, univariate data analysis was employed (i.e., independent $t$ test). Second, the association of cultural identification with health indicators was tested using multivariate data analysis (i.e., ordinary least squares [OLS] regression), while controlling for demographic and psychosocial variables. Third, to explore how cultural identification predicted health variables, and how this relationship was influenced by perceived discrimination, self-esteem, self-efficacy, and religiosity, a path analysis was applied using structural equation modeling (SEM).

Within SEM, path analysis is a special case of the structural model that includes only measured variables, which are assumed to represent the latent constructs. Path analysis does not incorporate
a measurement model and thus can be applied to smaller samples. In addition, using path analysis strengthens research design because it allows partitioning of simple correlations among a set of variables according to a particular working model about their causal relationships (e.g., how cultural identification is associated with perceived discrimination, and how perceived discrimination in turn is associated with health indicators). The model can be succinctly presented in a path diagram, where arrows indicate which of the many potential causal relationships among variables are allowed. The diagram can be translated into a set of linear equations that conventionally are solved using multiple regression techniques. However, the simple regression approach to path analysis requires many extra steps when analyzing complicated diagrams. Thus, due to its methodological advantages, especially in light of study sample size \((n = 123)\), a structural model using measured variables for path analysis was developed (Stephenson & Holbert, 2003).

**FINDINGS**

**Univariate Analysis**

Although on average male participants were older and had one year more of formal education than female participants, these differences were not statistically significant (see Table 1). However, females revealed stronger levels of identification with both cultures at levels that approached significance. Females reported significantly (a) higher perceived discrimination, (b) lower self-esteem, and (c) lower self-efficacy scores. The level of religiosity among study participants was relatively high, but there was no gender difference. Females exhibited significantly higher depression severity, more reported lifetime experience of culture-bound syndromes, and poorer self-rated emotional/mental and physical health.

Although not shown in Table 1, among all study participants, the mean level of mestizo cultural identification (MCI; \(M = 2.15\)) was significantly higher \((p = .000)\) than indigenous cultural identification (ICI; \(M = 1.72\)). In addition, participants who reported speaking indigenous languages \((n = 105)\) exhibited significantly higher \((p = .000)\) ICI scores \((M = 1.81, SD = .91)\) in comparison with those who indicated no ability to speak an indigenous language \((M = .88, SD = .89)\), while respondents who spoke an indigenous language demonstrated lower \((p = .06)\)

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Gender Differences in Demographic, Psychosocial, and Health Indicators</th>
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<tbody>
<tr>
<td>Male (M (SD))</td>
<td>Female (M (SD))</td>
</tr>
<tr>
<td>Age (18–71 years)</td>
<td>31.77 (11.74)</td>
</tr>
<tr>
<td>Education (0–12 years)</td>
<td>5.08 (3.14)</td>
</tr>
<tr>
<td>Indigenous cultural identification (0–3: mean of 4 items)</td>
<td>1.58 (0.90)</td>
</tr>
<tr>
<td>Mexican cultural identification (0–3: mean of 4 items)</td>
<td>2.08 (0.81)</td>
</tr>
<tr>
<td>Discrimination (0–18: sum of 6 items)</td>
<td>6.72 (5.11)</td>
</tr>
<tr>
<td>Self-esteem (0–27: sum of 9 items)</td>
<td>19.16 (3.73)</td>
</tr>
<tr>
<td>Self-efficacy (0–24: sum of 8 items)</td>
<td>17.17 (3.34)</td>
</tr>
<tr>
<td>Religiosity (0–10: sum of 4 items)</td>
<td>7.43 (3.11)</td>
</tr>
<tr>
<td>Depression severity score (0–27: sum of 9 items)</td>
<td>3.47 (4.80)</td>
</tr>
<tr>
<td>Lifetime culture-bound syndromes (0–3: sum of 3 items)</td>
<td>0.85 (1.01)</td>
</tr>
<tr>
<td>Self-rated emotional/mental health (0–3: 1 item)</td>
<td>1.61 (0.62)</td>
</tr>
<tr>
<td>Self-rated physical health (0–3: 1 item)</td>
<td>1.69 (0.72)</td>
</tr>
</tbody>
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MCI scores \((M = 2.11, SD = .84)\) than those who could not speak an indigenous language \((M = 2.53, SD = .66)\).

Regression Models

Associations between cultural identification and health indicators along with various demographic and psychosocial measures were tested (see Table 2). When controlling for other variables, depression severity exhibited a significant and positive association with MCI and perceived discrimination, but a negative association with self-esteem that approached significance. Not shown in Table 2, among 15 individuals that reported high depression severity \((\geq 10)\), 13 also reported high MCI scores \((> 2)\). Seven of these individuals were female, and chi-squared test \((\chi^2 = 5.93, df = 2, p < .05)\) revealed that females were disproportionately more likely to be in this pool. Being female was significantly associated with more lifetime experiences of culture-bound syndromes, but not with other health indicators. Self-rated emotional/mental health was not significantly associated with any of the predictor variables, but self-efficacy demonstrated a positive association with self-rated physical health.

Path Models

Research Hypothesis 1, indigenous cultural identification increases perceived discrimination, which in turn negatively affects health indicators, was tested in the initial path model (see Figure 1). This model fit very well with study data \((\chi^2 = 9.03, df = 8, p = .34, CFI = .985, RMSEA = .033; 90\% CI of RMSEA [.000, .114])\). As expected, ICI and MCI scores were correlated with medium effect size \((r = .38)\). ICI, but not MCI, was found to be significantly associated with an increased level of perceived discrimination \((\beta = .30)\). Perceived discrimination was found to be positively associated with an increased level of depression \((\beta = .27)\), and with reporting more lifetime experiences of culture-bound syndromes \((\beta = .19)\). Intercorrelations between measured errors of health indicators were tested and many significant and moderate correlations were identified. However, significant intercorrelations were not found between culture-bound syndromes and self-rated emotional/mental health or physical health.

<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tr>
<td>Regression Models Predicting Health Indicators</td>
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<table>
<thead>
<tr>
<th>Standardized Regression Coefficients (p values)</th>
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<tbody>
<tr>
<td><strong>Depression</strong></td>
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<tr>
<td>---</td>
</tr>
<tr>
<td>Being female</td>
</tr>
<tr>
<td>Age</td>
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<tr>
<td>Education</td>
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<tr>
<td>Indigenous cultural identification</td>
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<td>Mestizo cultural identification</td>
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<tr>
<td>Discrimination</td>
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<td>Self-esteem</td>
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<tr>
<td>Self-efficacy</td>
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<tr>
<td>Religiosity</td>
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<tr>
<td>Model description ((R^2))</td>
</tr>
</tbody>
</table>

S-R = self-rated.
Research Hypothesis 2, self-esteem moderates the association between perceived discrimination and health indicators, was tested in the advanced path model (see Figure 2). This model fits very well with study data ($\chi^2 = 18.14, df = 14, p = .20, CFI = .949, RMSEA = .049, 90\% CI of RMSEA [.000, .106]$). Perceived discrimination decreased self-esteem ($\beta = -.25$), which in turn was associated with: (a) increased levels of depression ($\beta = -.27$), (b) increased life-time experiences of culture-bound syndromes ($\beta = -.20$), and (c) poorer self-rated physical health ($\beta = .18$). Intercorrelations between measured errors of health indicators were tested and revealed to have similar patterns as in initial path model.

In the initial path model, perceived discrimination was allowed to directly influence health indicators (i.e., total effect), but not in the advanced path model, which means that the latter model provided a capacity to assess the indirect effects of discrimination through self-esteem on health indicators. There was a significant indirect effect through self-esteem to depression ($z$ test $= 2.10, p < .05$) which accounted for $25\%$ of the total effect of discrimination on depression (i.e., $(0.25*0.27)/0.27$). The indirect effect through self-esteem to culture-bound syndromes was also significant ($z$ test $= 1.79, p < .05$), which accounted for $26\%$ of the total effect of discrimination (i.e., $(0.25*0.20)/0.19$). Although a significant direct effect from self-esteem to self-rated physical health ($\beta = 0.18$) was found, the indirect effect from discrimination to self-rated physical health was insignificant ($z$ test $= 1.60, ns$).

To better understand how and to what extent self-efficacy influenced the effect of discrimination on health indicators, self-esteem was removed from advanced path model and replaced with self-efficacy. This new model (not shown) indicated there was no significant association between per-
ceived discrimination and self-efficacy. Religiosity was also tested in similar fashion, with similar results indicating no significant association between perceived discrimination and religiosity.

**DISCUSSION**

Study findings clearly indicated the importance of developing a better understanding of how indigenous cultural identity and related perceived discrimination affects the health of indigenous Mexican-origin populations in the United States. The value of the four-item OCIS (Oetting & Beauvais, 1990/1991) as a brief instrument for assessing this important dimension is supported by its factor structure and high internal consistency, as well as the finding that study participants speaking an indigenous language exhibited significantly higher ICI scores and lower MCI scores in comparison with those who reported an inability to speak an indigenous language.

This article provides important insights for health practitioners working with marginalized indigenous Mexican-origin populations. Factors affecting the health of this rapidly emerging population, including the effects of cultural identification and related discrimination, are understudied in the United States. These indigenous migrants have complex identities comprising differing degrees of identification with their particular indigenous cultures, as well as a majority mestizo culture. Indigenous Mexican migrants in the United States are likely to experience discrimination from mestizos because of their indigenous identity, and from mainstream U.S. society because of their Mexican identity. Martinez (2005) in her study of indigenous migrants in the United States stated “Mixtecs suffer discrimination due to their ethnic minority status among other Mexican agricultural workers. Being an ‘indio’ within a mestizo work force is difficult for Mixtecs” (p. 151).

Holmes (2006) found “much of the violence in southern Mexico is directed against indigenous people, especially against those involved in movements working toward equality. This violence affects indigenous people not only in Mexico, but also when they are in the U.S.” (p. 1787). Indigenous migrants interviewed in this study made up a minority in these isolated farmworker camps where mestizo Mexicans constituted the majority and controlled allocation of resources. This study provides unique contributions to our understanding of how the process of experiencing discrimination related to cultural identification can adversely affect the well-being of individuals coming from minority cultures.

Although prior research has shown that, in general, higher identification with any culture is associated with more positive psychosocial characteristics (Oetting, 1993), findings from this study suggest the necessity for a more nuanced understanding of the role of cultural identification. Dygert (2008) found that indigenous women in Mexico with limited formal education are widely viewed as embodying an especially true expression of indigenous cultural identity. She found that this results in these women bearing “much of the suffering meted out in the process of denigrating indigeneity, and they enact a crucial front-line politics as they combat the denigration of indigenousness in their daily lives” (p. iii). This study found that though females exhibited higher levels of identification with both cultures, they also exhibited significantly poorer scores on most psychosocial and health measures. Females also reported substantially higher levels of perceived discrimination, which appears to have contributed to their lesser well-being. These findings are consistent with the regression analysis of depression severity, where when discrimination and other variables are controlled for, the effect of gender is no longer significant. In the regression analysis of lifetime culture-bound syndromes, only the effect of being female is significant. The culture-bound syndrome variable measures more long-term, chronic mental health conditions, whereas the depression variable captures symptoms occurring during the past 2 weeks. Controlling for currently perceived discrimination appears to eliminate the effect of female gender on recently experienced symptoms of depression but does not eliminate the effect of female gender on lifetime experiences of culture-bound syndromes.
As study results clearly reveal indigenous female respondents experienced higher levels of discrimination and lower levels of self-esteem and self-efficacy, health promotion efforts with this population should focus on facilitating their empowerment. As many of these women come from patriarchal indigenous cultures where they have little voice in community affairs, interventions should create and support women-only group spaces that would provide women with an opportunity to develop their self-esteem and self-efficacy. Stephen (2004) observed that such spaces provide “many new arrivals—who are often socially isolated, lonely, and missing their extended families in Mexico—with a haven for sharing their feelings and working collectively to resolve common issues” (p. 196). Stephen further found that once women have developed their self-confidence in these support groups “they can translate these skills to other arenas, including union leadership slots, local political forums such as PTA meetings and city council meetings, and renegotiation of domestic roles” (p. 196).

The initial path model found a significant association between ICI and perceived discrimination, which in turn predicted depression severity and lifetime experiences of culture-bound syndromes. In the advanced path model, self-esteem is shown to moderate the effect of discrimination on these health indicators. These two path models explain why ICI did not predict depression or culture-bound syndromes when discrimination was controlled for in the regression model, because the effect of ICI needs to be mediated through perceived discrimination. In contrast, while MCI was a significant predictor for depression in the regression analysis, these path models indicated the effect of MCI was not mediated through discrimination.

Indigenous participants exhibiting higher MCI may be experiencing higher levels of psychological conflict related to the impact of acculturation processes that increase their vulnerability to mental distress. Oetting (1993) suggests that to understand the effects of a particular cultural identification in a specific life context, it is necessary to identify the culture-specific beliefs, attitudes, and values relevant to that particular context. Indigenous individuals with higher MCI may tend to make evaluative judgments of self and other community members based on mestizo cultural perspectives. In lived contexts where relevant aspects of mestizo culture denigrates indigenous cultural values, beliefs, and behaviors, indigenous individuals with higher MCI may as a result experience internal conflict and stress that results in mental distress (Alderete et al., 2000a; Martinez Novo, 2006). Findings from this exploratory study suggest the need for further research into why higher MCI is a risk factor for depression under these circumstances for indigenous Mexican migrants.

Various concerns limit the inferences that can be made from these findings. This study employed self-reporting in the collection of mental health related data from individuals who come from cultures unaccustomed to such methods, which may have introduced the possibility of bias and error. Study sample size may have limited the statistical power available to adequately test all research hypotheses. The majority of the study sample (69.9%) were male, which may have limited our ability to identify the relationship of gender with cultural identification and other important study variables. Study participants were relatively recent immigrants accustomed to living in isolated migrant farmworker camps; thus, results may not generalize to indigenous Mexican immigrants with more extensive experiences in the United States. The lack of indigenous interviewers may have affected quality of responses, but the researchers emphasized respect for indigenous cultures throughout the design and implementation of this study. Although study participants were able to understand survey questions in Spanish, and were able to answer appropriately in Spanish, the use of indigenous speaking interviewers might have improved the validity of study findings. Future research with this population would benefit from the recruitment, training, and utilization of indigenous interviewers who cannot only speak indigenous languages, but also who are intimately familiar with indigenous cultures. This will be very challenging, as research participants included members of nine different linguistic/cultural indigenous communities, and these populations are relatively new to the United States.
Although eliminating discrimination itself should be a primary focus of policy that seeks to address the cultural and social determinants of health among indigenous Mexican migrants in the United States, findings clearly indicated that self-esteem moderates the effect of discrimination on health indicators. Because indigenous Mexicans have a long history of experiences with collective action for community development and social justice (Fox & Rivera-Salgado, 2004), health promotion efforts should include an emphasis on bringing indigenous community members together in a process that will provide an opportunity to cultivate pride in their indigenous cultures, and to develop mutual support groups. Such efforts might also benefit from linking with already existing indigenous support and advocacy organizations such as the Frente Indígena de Organizaciones Binacionales (Binational Front of Indigenous Organizations; http://fiob.org/). Organizational efforts of this nature have the potential to empower the indigenous Mexican community in the United States to reframe Mexican migration as a multiethnic phenomenon, which will hopefully lead to the formation of public policy that recognizes and better meets the unique needs of this population.

Despite their rapidly growing numbers, to our knowledge there have been no studies on how the complex cultural identity of indigenous Mexican migrants in the United States affects their health. Cultural identification and related perceived discrimination are two factors that must be accounted for in any research, intervention, or policy efforts with this population. Clarifying the interrelationship of these two factors and how they interact with other psychosocial factors to impact well-being will ensure that future work with this population will be both scientifically informed and culturally aware.

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